What is claimed is:

1. An isolated polypeptide comprising an amino acid sequence selected from the group consisting of:

a) an amino acid sequence of SEQ ID NO:1,

b) a naturally occurring amino acid sequence having at least 95% sequence identity to an amino acid sequence of SEQ ID NO:1,

c) a biologically active fragment of an amino acid sequence of SEQ ID NO:1, and

d) an immunogenic fragment of an amino acid sequence of SEQ ID NO:1.

2. An isolated polypeptide of claim 1, having a sequence of SEQ ID NO:1.

3. A composition comprising an effective amount of a polypeptide of claim 1 and an acceptable excipient.

4. A composition of claim 3, wherein the polypeptide has the sequence of SEQ ID NO:1.

5. An isolated polynucleotide encoding a polypeptide of claim 1.

6. A recombinant polynucleotide comprising a promoter sequence operably linked to a polynucleotide of claim 5.

7. A cell transformed with a recombinant polynucleotide of claim 6.

8. A method for producing a polypeptide of claim 1, the method comprising:

a) culturing a cell under conditions suitable for expression of the polypeptide, wherein said cell is transformed with a recombinant polynucleotide, and said recombinant polynucleotide comprises a promoter sequence operably linked to a polynucleotide encoding the polypeptide of claim 1, and

b) recovering the polypeptide so expressed.

9. An isolated antibody which specifically binds to a polypeptide of claim 1.

10. An isolated polynucleotide comprising a polynucleotide sequence selected from the

group consisting of:

a) a polynucleotide sequence of SEQ ID NO:2,

b) a naturally occurring polynucleotide sequence having at least 95% sequence identity to a polynucleotide sequence of SEQ ID NO:2,

c) a polynucleotide sequence complementary to a),

d) a polynucleotide sequence complementary to b), and

e) an RNA equivalent of a)-d).

11. An isolated polynucleotide comprising at least 60 contiguous nucleic acids of claim 10.

12. A method for detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 10, the method comprising:

a) hybridizing the sample with a probe comprising at least 20 contiguous nucleotides comprising a sequence complementary to said target polynucleotide in the sample, and which probe specifically hybridizes to said target polynucleotide, under conditions whereby a hybridization complex is formed between said probe and said target polynucleotide or fragments thereof, and

b) detecting the presence or absence of said hybridization complex, and, optionally, if present, the amount thereof.

13. A method of claim 12, wherein the probe comprises at least 60 contiguous nucleotides.

14. A method for detecting a target polynucleotide in a sample, said target polynucleotide having a sequence of a polynucleotide of claim 10, the method comprising:

a) amplifying said target polynucleotide or fragment thereof using polymerase chain reaction amplification, and

b) detecting the presence or absence of said amplified target polynucleotide or fragment thereof, and, optionally, if present, the amount thereof.

15. A method for screening a compound for effectiveness as an agonist of a polypeptide of claim 1, the method comprising:

a) exposing a sample comprising a polypeptide of claim 1 to a compound, and

b) detecting agonist activity in the sample.

16. A method for screening a compound for effectiveness as an antagonist of a polypeptide of claim 1, the method comprising:

a) exposing a sample comprising a polypeptide of claim 1 to a compound, and

b) detecting antagonist activity in the sample.

17. A method for screening a compound for effectiveness in altering expression of a target polynucleotide, wherein said target polynucleotide comprises a polynucleotide sequence of SEQ ID NO:2, the method comprising:

a) exposing a sample comprising the target polynucleotide to a compound, under conditions suitable for the expression of the target polynucleotide,

b) detecting altered expression of the target polynucleotide, and

c) comparing the expression of the target polynucleotide in the presence of varying amounts of the compound and in the absence of the compound.

18. A method for assessing toxicity of a test compound, said method comprising:

a) treating a biological sample containing nucleic acids with the test compound;

b) hybridizing the nucleic acids of the treated biological sample with a probe comprising at least 20 contiguous nucleotides of a polynucleotide of claim 10 under conditions whereby a specific hybridization complex is formed between said probe and a target polynucleotide in the biological sample, said target polynucleotide comprising a polynucleotide sequence of a polynucleotide of claim 8 or fragment thereof;

c) quantifying the amount of hybridization complex; and

d) comparing the amount of hybridization complex in the treated biological sample with the amount of hybridization complex in an untreated biological sample, wherein a difference in the amount of hybridization complex in the treated biological sample is indicative of toxicity of the test compound.

19. A diagnostic test for a condition or disease associated with the expression of NSYN-1 in a biological sample comprising the steps of:

a) combining the biological sample with an antibody of claim 9, under conditions

suitable for the antibody to bind the polypeptide and form an antibody: polypeptide complex; and

b) detecting the complex, wherein the presence of the complex correlates with the presence of the polypeptide in the biological sample.

20. The antibody of claim 9, wherein the antibody is:

(a) a chimeric antibody;

(b) a single chain antibody;

(c) a Fab fragment;

(d) a $F(ab')_2$ fragment;

(e) a Fv fragment; or

(f) a humanized antibody.

21. A pharmaceutical composition comprising an antibody of claim 9 and a pharmaceutically acceptable excipient.

22. A method of diagnosing a condition or disease associated with the expression of NSYN-1 in a subject, comprising administering to said subject an effective amount of the pharmaceutical composition of claim 21.

23. A pharmaceutical composition of claim 21, wherein the antibody is labeled.

24. A method of diagnosing a condition or disease associated with the expression of NSYN-1 in a subject, comprising administering to said subject an effective amount of the pharmaceutical composition of claim 23.

25. A method of preparing a polyclonal antibody with the specificity of the antibody of claim 9 comprising:

a) immunizing an animal with a polypeptide of SEQ ID NO:1 or an antigenically-effective fragment thereof under conditions to elicit an antibody response;

b) isolating animal antibodies; and

c) screening the isolated antibodies with the polypeptide thereby identifying a polyclonal antibody binds specifically to a polypeptide of SEQ ID NO:1.

26. An antibody produced by a method of claim 25.

27. A pharmaceutical composition comprising the antibody of claim 26 in conjunction with a suitable pharmaceutical carrier.

28. A method of making a monoclonal antibody with the specificity of the antibody of claim 9 comprising:

a) immunizing an animal with a polypeptide of SEQ ID NO:1 or an antigenically-effective fragment thereof under conditions to elicit an antibody response;

b) isolating antibody producing cells from the animal;

c) fusing the antibody producing cells with immortalized cells in culture to form monoclonal antibody-producing hybridoma cells;

d) culturing the hybridoma cells; and

e) isolating from the culture monoclonal antibodies which binds specifically to a polypeptide of SEQ ID NO:1.

29. A monoclonal antibody produced by a method of claim 28.

30. A pharmaceutical composition comprising the antibody of claim 29 in conjunction with a suitable pharmaceutical carrier.

31. The antibody of claim 9, wherein the antibody is produced by screening a Fab expression library.

32. The antibody of claim 9, wherein the antibody is produced by screening a recombinant immunoglobulin library.

33. A method for detecting a polypeptide of SEQ ID NO:1 in a sample comprising the steps of:

a) combining the antibody of claim 9 with a sample under conditions to allow specific binding; and

b) detecting specific binding, wherein specific binding indicates the presence of polypeptide of SEQ ID NO:1 in the sample.

34. A method of using an antibody to purify polypeptide of SEQ ID NO:1 from a sample, the method comprising:

a) combining the antibody of claim 9 with a sample under conditions to allow specific binding; and

b) separating the antibody from the protein, thereby obtaining purified polypeptide of SEQ ID NO:1.